Neodređeni integral – 1. dio

MATEMATIKA 2

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Sadržaj

prvi zadatak

Zadatak 1

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}}$.

$$\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Zadatak 1

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}}$.

Rješenje

$$\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}} =$$

Zadatak 1

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}}$.

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\sqrt[n]{x^m} = x^{\frac{m}{n}}}$$

Rješenje

$$\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}} = \int x^{-\frac{3}{4}} \, \mathrm{d}x$$

Zadatak 1

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$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\sqrt[n]{x^m} = x^{\frac{m}{n}}}$$

Rješenje

$$\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}} = \int x^{-\frac{3}{4}} \,\mathrm{d}x = \frac{x^{-\frac{3}{4}+1}}{-\frac{3}{4}+1}$$

Zadatak 1

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}}$.

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

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Rješenje

$$\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}} = \int x^{-\frac{3}{4}} \,\mathrm{d}x = \frac{x^{-\frac{3}{4}+1}}{-\frac{3}{4}+1} + C$$

$$\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Zadatak 1

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}}$.

Rješenje

$$\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}} = \int x^{-\frac{3}{4}} \, \mathrm{d}x = \frac{x^{-\frac{3}{4}+1}}{-\frac{3}{4}+1} + C =$$

$$= \frac{x^{\frac{1}{4}}}{\frac{1}{4}} + C$$

Zadatak 1

$$\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}}$.

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Rješenje

$$\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}} = \int x^{-\frac{3}{4}} \, \mathrm{d}x = \frac{x^{-\frac{3}{4}+1}}{-\frac{3}{4}+1} + C =$$

$$= \frac{x^{\frac{1}{4}}}{\frac{1}{4}} + C = 4\sqrt[4]{x} + C$$

Zadatak 1

$$\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

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Riješite neodređeni integral $\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}}$.

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$$\int \frac{\mathrm{d}x}{\sqrt[4]{x^3}} = \int x^{-\frac{3}{4}} \, \mathrm{d}x = \frac{x^{-\frac{3}{4}+1}}{-\frac{3}{4}+1} + C =$$

$$= \frac{x^{\frac{1}{4}}}{\frac{1}{4}} + C = 4\sqrt[4]{x} + C, \quad C \in \mathbb{R}$$

drugi zadatak

Zadatak 2

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5}\,\mathrm{d}x$.

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x =$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{\qquad\qquad}{}$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{}{x^5}$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{x^2 \qquad\qquad}{x^5}$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{x^2 - 6x }{x^5}$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{x^2 - 6x + 9}{x^5}$$

Zadatak 2

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Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{x^2 - 6x + 9}{x^5} \, \mathrm{d}x = \int \Bigg($$

Zadatak 2

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Rješenje

$$\int \frac{(x-3)^2}{x^5}\,\mathrm{d}x = \int \frac{x^2-6x+9}{x^5}\,\mathrm{d}x = \int \Bigg(\frac{1}{x^3}$$

Zadatak 2

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Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{x^2 - 6x + 9}{x^5} \, \mathrm{d}x = \int \left(\frac{1}{x^3} - \frac{6}{x^4} + \frac{9}{x^5} \right)$$

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$$= \int x^{-3}\,\mathrm{d}x$$

Zadatak 2

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$$= \int x^{-3}\,\mathrm{d}x - 6\int x^{-4}\,\mathrm{d}x$$

Zadatak 2

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \,\mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \,\mathrm{d}x = \int \frac{x^2 - 6x + 9}{x^5} \,\mathrm{d}x = \int \left(\frac{1}{x^3} - \frac{6}{x^4} + \frac{9}{x^5} \right) \mathrm{d}x =$$

$$= \int x^{-3} \,\mathrm{d}x - 6 \int x^{-4} \,\mathrm{d}x +$$

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$$= \int x^{-3}\,\mathrm{d}x - 6\int x^{-4}\,\mathrm{d}x + 9\int x^{-5}\,\mathrm{d}x$$

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$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

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$$= \int x^{-3} \, \mathrm{d}x - 6 \int x^{-4} \, \mathrm{d}x + 9 \int x^{-5} \, \mathrm{d}x =$$

$$= \frac{x^{-2}}{-2}$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\displaystyle\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

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$$= \int x^{-3} \, \mathrm{d}x - 6 \int x^{-4} \, \mathrm{d}x + 9 \int x^{-5} \, \mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6 \cdot$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

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$$= \int x^{-3} \, \mathrm{d}x - 6 \int x^{-4} \, \mathrm{d}x + 9 \int x^{-5} \, \mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6 \cdot \frac{x^{-3}}{-3}$$

Zadatak 2

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\displaystyle\int \frac{(x-3)^2}{x^5}\,\mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5}\,\mathrm{d}x = \int \frac{x^2-6x+9}{x^5}\,\mathrm{d}x = \int \left(\frac{1}{x^3} - \frac{6}{x^4} + \frac{9}{x^5}\right)\mathrm{d}x =$$

$$= \int x^{-3}\,\mathrm{d}x - 6\int x^{-4}\,\mathrm{d}x + 9\int x^{-5}\,\mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6\cdot\frac{x^{-3}}{-3} + 9\,\cdot$$

Zadatak 2

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

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$$= \int x^{-3}\,\mathrm{d}x - 6\int x^{-4}\,\mathrm{d}x + 9\int x^{-5}\,\mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6\cdot\frac{x^{-3}}{-3} + 9\cdot\frac{x^{-4}}{-4}$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{x^2 - 6x + 9}{x^5} \, \mathrm{d}x = \int \left(\frac{1}{x^3} - \frac{6}{x^4} + \frac{9}{x^5} \right) \mathrm{d}x =$$

$$= \int x^{-3} \, \mathrm{d}x - 6 \int x^{-4} \, \mathrm{d}x + 9 \int x^{-5} \, \mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6 \cdot \frac{x^{-3}}{-3} + 9 \cdot \frac{x^{-4}}{-4} + C$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\displaystyle\int \frac{(x-3)^2}{x^5}\,\mathrm{d}x$.

Rješenje

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$$= \int x^{-3}\,\mathrm{d}x - 6\int x^{-4}\,\mathrm{d}x + 9\int x^{-5}\,\mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6\cdot\frac{x^{-3}}{-3} + 9\cdot\frac{x^{-4}}{-4} + C =$$

$$= -\frac{1}{2x^2}$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{x^2 - 6x + 9}{x^5} \, \mathrm{d}x = \int \left(\frac{1}{x^3} - \frac{6}{x^4} + \frac{9}{x^5} \right) \mathrm{d}x =$$

$$= \int x^{-3} \, \mathrm{d}x - 6 \int x^{-4} \, \mathrm{d}x + 9 \int x^{-5} \, \mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6 \cdot \frac{x^{-3}}{-3} + 9 \cdot \frac{x^{-4}}{-4} + C =$$

$$= -\frac{1}{2x^2} + \frac{2}{x^3}$$

Zadatak 2

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \,\mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \,\mathrm{d}x = \int \frac{x^2 - 6x + 9}{x^5} \,\mathrm{d}x = \int \left(\frac{1}{x^3} - \frac{6}{x^4} + \frac{9}{x^5} \right) \mathrm{d}x =$$

$$= \int x^{-3} \,\mathrm{d}x - 6 \int x^{-4} \,\mathrm{d}x + 9 \int x^{-5} \,\mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6 \cdot \frac{x^{-3}}{-3} + 9 \cdot \frac{x^{-4}}{-4} + C =$$

$$= -\frac{1}{2x^2} + \frac{2}{x^3} - \frac{9}{4x^4}$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x$.

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{x^2 - 6x + 9}{x^5} \, \mathrm{d}x = \int \left(\frac{1}{x^3} - \frac{6}{x^4} + \frac{9}{x^5} \right) \mathrm{d}x =$$

$$= \int x^{-3} \, \mathrm{d}x - 6 \int x^{-4} \, \mathrm{d}x + 9 \int x^{-5} \, \mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6 \cdot \frac{x^{-3}}{-3} + 9 \cdot \frac{x^{-4}}{-4} + C =$$

$$= -\frac{1}{2x^2} + \frac{2}{x^3} - \frac{9}{4x^4} + C$$

Zadatak 2

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Riješite neodređeni integral $\displaystyle\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x.$

Rješenje

$$\int \frac{(x-3)^2}{x^5} \, \mathrm{d}x = \int \frac{x^2-6x+9}{x^5} \, \mathrm{d}x = \int \left(\frac{1}{x^3} - \frac{6}{x^4} + \frac{9}{x^5} \right) \mathrm{d}x =$$

$$= \int x^{-3} \, \mathrm{d}x - 6 \int x^{-4} \, \mathrm{d}x + 9 \int x^{-5} \, \mathrm{d}x =$$

$$= \frac{x^{-2}}{-2} - 6 \cdot \frac{x^{-3}}{-3} + 9 \cdot \frac{x^{-4}}{-4} + C =$$

$$= -\frac{1}{2x^2} + \frac{2}{x^3} - \frac{9}{4x^4} + C, \quad C \in \mathbb{R}$$

treći zadatak

Zadatak 3

Riješite neodređeni integral $\int (5e^x - 3\sin x)\,\mathrm{d}x$.

Zadatak 3

Riješite neodređeni integral $\int \left(5e^x - 3\sin x\right)\mathrm{d}x$.

Rješenje

$$\int \left(5e^x - 3\sin x\right)\mathrm{d}x =$$

$\boxed{\int e^x \,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x \,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\int (5e^x - 3\sin x)\,\mathrm{d}x$.

Rješenje

$$\int (5e^x - 3\sin x)\,\mathrm{d}x = 5\int e^x\,\mathrm{d}x$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\int \big(5e^x - 3\sin x\big)\mathrm{d}x$.

Rješenje

$$\int \big(5e^x - 3\sin x\big)\mathrm{d}x = 5\int e^x\,\mathrm{d}x -$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\int \left(5e^x - 3\sin x\right)\mathrm{d}x$.

Rješenje

$$\int \left(5e^x - 3\sin x\right)\mathrm{d}x = 5\int e^x\,\mathrm{d}x - 3\int \sin x\,\mathrm{d}x$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\int \big(5e^x - 3\sin x\big)\mathrm{d}x$.

Rješenje

$$\int \big(5e^x - 3\sin x\big)\mathrm{d}x = 5\int e^x\,\mathrm{d}x - 3\int \sin x\,\mathrm{d}x =$$

$$= 5$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\displaystyle\int \big(5e^x - 3\sin x\big)\,\mathrm{d}x$.

Rješenje

$$\int \big(5e^x - 3\sin x\big)\mathrm{d}x = 5\int e^x\,\mathrm{d}x - 3\int \sin x\,\mathrm{d}x =$$

$$= 5e^x$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\int \left(5e^x - 3\sin x\right)\mathrm{d}x$.

Rješenje

$$\int \left(5e^x - 3\sin x\right)\mathrm{d}x = 5\int e^x\,\mathrm{d}x - 3\int \sin x\,\mathrm{d}x =$$

$$= 5e^x -$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\displaystyle\int \big(5e^x - 3\sin x\big)\,\mathrm{d}x$.

Rješenje

$$\int \big(5e^x - 3\sin x\big)\mathrm{d}x = 5\int e^x\,\mathrm{d}x - 3\int \sin x\,\mathrm{d}x =$$

$$= 5e^x - 3\,\cdot$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\int \left(5e^x - 3\sin x\right)\mathrm{d}x$.

Rješenje

$$\int \left(5e^x - 3\sin x\right)\mathrm{d}x = 5\int e^x\,\mathrm{d}x - 3\int \sin x\,\mathrm{d}x =$$

$$= 5e^x - 3\cdot(-\cos x)$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\int \big(5e^x - 3\sin x\big)\mathrm{d}x$.

Rješenje

$$\int \big(5e^x - 3\sin x\big)\mathrm{d}x = 5\int e^x\,\mathrm{d}x - 3\int \sin x\,\mathrm{d}x =$$

$$= 5e^x - 3\cdot(-\cos x) + C$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\int (5e^x - 3\sin x)\,\mathrm{d}x$.

Rješenje

$$\begin{aligned}\int (5e^x - 3\sin x)\,\mathrm{d}x &= 5\int e^x\,\mathrm{d}x - 3\int \sin x\,\mathrm{d}x = \\ &= 5e^x - 3\cdot(-\cos x) + C = \\ &= 5e^x + 3\cos x + C\end{aligned}$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

Zadatak 3

Riješite neodređeni integral $\int (5e^x - 3\sin x)\,\mathrm{d}x$.

Rješenje

$$\int (5e^x - 3\sin x)\,\mathrm{d}x = 5\int e^x\,\mathrm{d}x - 3\int \sin x\,\mathrm{d}x =$$

$$= 5e^x - 3\cdot(-\cos x) + C =$$

$$= 5e^x + 3\cos x + C, \quad C \in \mathbb{R}$$

$\boxed{\int e^x\,\mathrm{d}x = e^x + C}$ $\boxed{\int \sin x\,\mathrm{d}x = -\cos x + C}$

četvrti zadatak

Zadatak 4

Riješite neodređeni integral $\int 3^x e^x \, \mathrm{d}x$.

Zadatak 4

Riješite neodređeni integral $\int 3^x e^x \,\mathrm{d}x$.

Rješenje

$$\int 3^x e^x \,\mathrm{d}x =$$

$$\boxed{(ab)^n = a^n b^n}$$

Zadatak 4

Riješite neodređeni integral $\int 3^x e^x \, \mathrm{d}x$.

Rješenje

$$\int 3^x e^x \, \mathrm{d}x = \int (3e)^x \, \mathrm{d}x$$

$$\boxed{(ab)^n = a^n b^n} \quad \boxed{\int a^x \, \mathrm{d}x = \frac{a^x}{\ln a} + C} \quad \boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 4

Riješite neodređeni integral $\int 3^x e^x \,\mathrm{d}x$.

Rješenje

$$\int 3^x e^x \,\mathrm{d}x = \int (3e)^x \,\mathrm{d}x = \frac{(3e)^x}{\ln(3e)}$$

$\boxed{(ab)^n = a^n b^n}$ $\boxed{\int a^x \,\mathrm{d}x = \frac{a^x}{\ln a} + C}$ $\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$

Zadatak 4

Riješite neodređeni integral $\int 3^x e^x \,\mathrm{d}x$.

Rješenje

$$\int 3^x e^x \,\mathrm{d}x = \int (3e)^x \,\mathrm{d}x = \frac{(3e)^x}{\ln(3e)} + C$$

$$\boxed{(ab)^n = a^n b^n} \quad \boxed{\int a^x \,\mathrm{d}x = \frac{a^x}{\ln a} + C} \quad \boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 4

Riješite neodređeni integral $\int 3^x e^x \, \mathrm{d}x$.

Rješenje

$$\int 3^x e^x \, \mathrm{d}x = \int (3e)^x \, \mathrm{d}x = \frac{(3e)^x}{\ln(3e)} + C, \quad C \in \mathbb{R}$$

$$\boxed{(ab)^n = a^n b^n} \quad \boxed{\int a^x \, \mathrm{d}x = \frac{a^x}{\ln a} + C} \quad \boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

peti zadatak

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x.$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x =$$

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\qquad\qquad}{\qquad\qquad}$$

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{}{\cos^2 x \sin^2 x}$$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}$$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\, \mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\, \mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\, \mathrm{d}x =$$

$$= \int \Bigg(\qquad \qquad \qquad \Bigg)\, \mathrm{d}x$$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x} \, \mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} \qquad \qquad \right) \mathrm{d}x$$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x} \, \mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \qquad \right) \mathrm{d}x$$

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x$$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x} \, \mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x} \, \mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x} \right) \mathrm{d}x =$$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x = \int \frac{\mathrm{d}x}{\sin^2 x}$$

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x.$

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x = \int \frac{\mathrm{d}x}{\sin^2 x} -$$

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x.$

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x = \int \frac{\mathrm{d}x}{\sin^2 x} - \int \frac{\mathrm{d}x}{\cos^2 x}$$

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x.$

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x = \int \frac{\mathrm{d}x}{\sin^2 x} - \int \frac{\mathrm{d}x}{\cos^2 x} =$$

$$=$$

$$\boxed{\int \frac{\mathrm{d}x}{\sin^2 x} = -\operatorname{ctg} x + C} \qquad \boxed{\int \frac{\mathrm{d}x}{\cos^2 x} = \operatorname{tg} x + C}$$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x = \int \frac{\mathrm{d}x}{\sin^2 x} - \int \frac{\mathrm{d}x}{\cos^2 x} =$$

$$= -\operatorname{ctg} x$$

$$\boxed{\int \frac{\mathrm{d}x}{\sin^2 x} = -\operatorname{ctg} x + C} \qquad \boxed{\int \frac{\mathrm{d}x}{\cos^2 x} = \operatorname{tg} x + C}$$

Zadatak 5

Riješite neodređeni integral $\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x = \int \frac{\mathrm{d}x}{\sin^2 x} - \int \frac{\mathrm{d}x}{\cos^2 x} =$$

$$= -\operatorname{ctg} x -$$

$$\boxed{\int \frac{\mathrm{d}x}{\sin^2 x} = -\operatorname{ctg} x + C} \quad \boxed{\int \frac{\mathrm{d}x}{\cos^2 x} = \operatorname{tg} x + C}$$

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x = \int \frac{\mathrm{d}x}{\sin^2 x} - \int \frac{\mathrm{d}x}{\cos^2 x} =$$

$$= -\operatorname{ctg} x - \operatorname{tg} x$$

$$\boxed{\int \frac{\mathrm{d}x}{\sin^2 x} = -\operatorname{ctg} x + C} \quad \boxed{\int \frac{\mathrm{d}x}{\cos^2 x} = \operatorname{tg} x + C}$$

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x = \int \frac{\mathrm{d}x}{\sin^2 x} - \int \frac{\mathrm{d}x}{\cos^2 x} =$$

$$= -\operatorname{ctg} x - \operatorname{tg} x + C$$

$$\boxed{\int \frac{\mathrm{d}x}{\sin^2 x} = -\operatorname{ctg} x + C} \quad \boxed{\int \frac{\mathrm{d}x}{\cos^2 x} = \operatorname{tg} x + C}$$

Zadatak 5

Riješite neodređeni integral $\displaystyle\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x.$

Rješenje

$$\int \frac{\cos 2x}{\cos^2 x \sin^2 x}\,\mathrm{d}x = \int \frac{\cos^2 x - \sin^2 x}{\cos^2 x \sin^2 x}\,\mathrm{d}x =$$

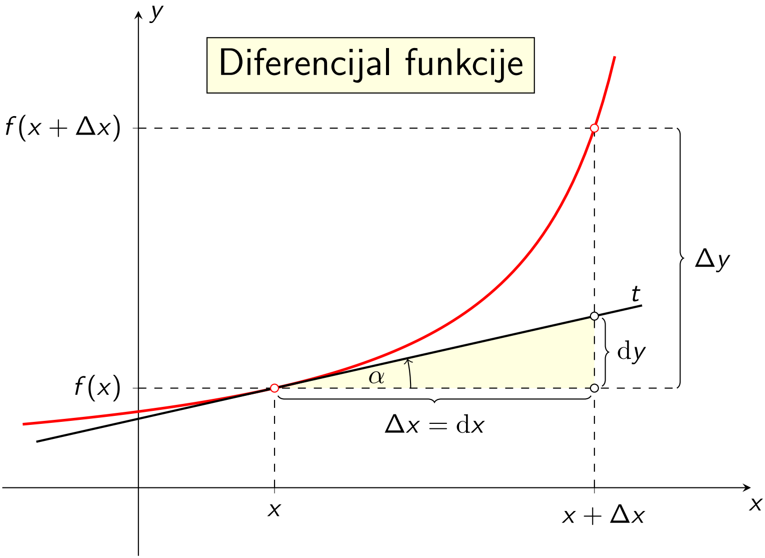
$$= \int \left(\frac{1}{\sin^2 x} - \frac{1}{\cos^2 x}\right)\mathrm{d}x = \int \frac{\mathrm{d}x}{\sin^2 x} - \int \frac{\mathrm{d}x}{\cos^2 x} =$$

$$= -\operatorname{ctg} x - \operatorname{tg} x + C, \quad C \in \mathbb{R}$$

$$\boxed{\int \frac{\mathrm{d}x}{\sin^2 x} = -\operatorname{ctg} x + C} \qquad \boxed{\int \frac{\mathrm{d}x}{\cos^2 x} = \operatorname{tg} x + C}$$

Diferencijal realne funkcije jedne realne varijable

Diferencijal funkcije



$$y = f(x), \qquad f'(x) = \operatorname{tg}\alpha = \frac{\mathrm{d}y}{\mathrm{d}x}, \qquad \mathrm{d}y = f'(x)\,\mathrm{d}x$$

šesti zadatak

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \,\mathrm{d}x$.

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \,\mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \,\mathrm{d}x =$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{l} 3-2x = t \\ \end{array} \right.$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{l} 3-2x = t \, / \, ' \\ \\ \end{array} \right.$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{aligned} t &= f(x) \\ \mathrm{d}t &= f'(x) \, \mathrm{d}x \end{aligned}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{l} 3-2x = t \, / \, ' \\ -2 \end{array} \right.$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x) \, \mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{l} 3-2x = t \, / \, ' \\ -2 \, \mathrm{d}x \end{array} \right.$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{aligned} t &= f(x) \\ \mathrm{d}t &= f'(x) \, \mathrm{d}x \end{aligned}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{l} 3-2x = t \,/\, ' \\ -2\,\mathrm{d}x = \end{array} \right.$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{aligned} t &= f(x) \\ \mathrm{d}t &= f'(x)\,\mathrm{d}x \end{aligned}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \,\mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \,\mathrm{d}x = \left[\begin{array}{r} 3-2x = t \,/\, ' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array} \right.$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x)\,\mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \,\mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \,\mathrm{d}x = \left[\begin{array}{c} 3-2x = t \,/\,' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array} \right]$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x)\,\mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \,\mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \,\mathrm{d}x = \left[\begin{array}{c} 3-2x = t \,/\,' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array} \right] = \int$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x)\,\mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{c} 3-2x = t \; / \; ' \\ -2 \, \mathrm{d}x = \mathrm{d}t \end{array} \right] = \int t^8$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x) \, \mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{c} 3-2x = t \, / \, ' \\ -2 \, \mathrm{d}x = \mathrm{d}t \end{array} \right] = \int t^8 \cdot$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x) \, \mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \,\mathrm{d}x$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int (3-2x)^8 \,\mathrm{d}x = \left[\begin{array}{c} 3-2x = t \,/\, ' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array} \right] = \int t^8 \cdot \frac{\mathrm{d}t}{-2}$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x)\,\mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{c} 3-2x = t \, / \, ' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array} \right] = \int t^8 \cdot \frac{\mathrm{d}t}{-2} =$$

$$= -\frac{1}{2} \int t^8 \, \mathrm{d}t$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x) \, \mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \,\mathrm{d}x$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int (3-2x)^8 \,\mathrm{d}x = \begin{bmatrix} 3-2x = t \,/\,' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int t^8 \cdot \frac{\mathrm{d}t}{-2} =$$

$$= -\frac{1}{2}\int t^8 \,\mathrm{d}t = -\frac{1}{2}\cdot$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{aligned} t &= f(x) \\ \mathrm{d}t &= f'(x)\,\mathrm{d}x \end{aligned}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{c} 3-2x = t \,/\, ' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array} \right] = \int t^8 \cdot \frac{\mathrm{d}t}{-2} =$$

$$= -\frac{1}{2} \int t^8 \, \mathrm{d}t = -\frac{1}{2} \cdot \frac{t^9}{9}$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x)\,\mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \begin{bmatrix} 3-2x = t \,/\, ' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int t^8 \cdot \frac{\mathrm{d}t}{-2} =$$

$$= -\frac{1}{2} \int t^8 \, \mathrm{d}t = -\frac{1}{2} \cdot \frac{t^9}{9} + C$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x)\,\mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \,\mathrm{d}x$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int (3-2x)^8 \,\mathrm{d}x = \begin{bmatrix} 3-2x = t \,/\,' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int t^8 \cdot \frac{\mathrm{d}t}{-2} =$$

$$= -\frac{1}{2}\int t^8 \,\mathrm{d}t = -\frac{1}{2}\cdot\frac{t^9}{9} + C = -\frac{1}{18}t^9 + C$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{aligned} t &= f(x) \\ \mathrm{d}t &= f'(x)\,\mathrm{d}x \end{aligned}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

$$\mathrm{d}x = \frac{\mathrm{d}t}{-2}$$

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{c} 3-2x = t \,/\, ' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array} \right] = \int t^8 \cdot \frac{\mathrm{d}t}{-2} =$$

$$= -\frac{1}{2} \int t^8 \, \mathrm{d}t = -\frac{1}{2} \cdot \frac{t^9}{9} + C = -\frac{1}{18} t^9 + C =$$

$$= -\frac{1}{18}$$

$$\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

$$t = f(x)$$
$$\mathrm{d}t = f'(x)\,\mathrm{d}x$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{c} 3-2x = t \; / \; ' \\ -2 \, \mathrm{d}x = \mathrm{d}t \end{array} \right] = \int t^8 \cdot \frac{\mathrm{d}t}{-2} =$$

$$= -\frac{1}{2} \int t^8 \, \mathrm{d}t = -\frac{1}{2} \cdot \frac{t^9}{9} + C = -\frac{1}{18} t^9 + C =$$

$$= -\frac{1}{18} (3-2x)^9$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x) \, \mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \, \mathrm{d}x$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int (3-2x)^8 \, \mathrm{d}x = \left[\begin{array}{c} 3-2x = t \, / \, ' \\ -2 \, \mathrm{d}x = \mathrm{d}t \end{array} \right] = \int t^8 \cdot \frac{\mathrm{d}t}{-2} =$$

$$= -\frac{1}{2} \int t^8 \, \mathrm{d}t = -\frac{1}{2} \cdot \frac{t^9}{9} + C = -\frac{1}{18} t^9 + C =$$

$$= -\frac{1}{18} (3-2x)^9 + C$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x) \, \mathrm{d}x \end{array}}$$

Zadatak 6

Riješite neodređeni integral $\int (3-2x)^8 \,\mathrm{d}x$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int (3-2x)^8 \,\mathrm{d}x = \left[\begin{array}{c} 3-2x = t \,/\,' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int t^8 \cdot \frac{\mathrm{d}t}{-2} =$$

$$= -\frac{1}{2}\int t^8 \,\mathrm{d}t = -\frac{1}{2}\cdot\frac{t^9}{9} + C = -\frac{1}{18}t^9 + C =$$

$$= -\frac{1}{18}(3-2x)^9 + C, \quad C \in \mathbb{R}$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{\begin{array}{c} t = f(x) \\ \mathrm{d}t = f'(x)\,\mathrm{d}x \end{array}}$$

sedmi zadatak

Zadatak 7

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x =$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \Bigg[$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{l} x-2=t \\ \\ \end{array}\right.$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\ x - 2 = t \ /\ ' \right.$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2 = t \,/\,' \\ \mathrm{d}x \end{array} \right.$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Zadatak 7

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2 = t \;/\,' \\ \mathrm{d}x = \end{array}\right.$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2 = t \,/\, ' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right.$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\boxed{\sqrt[n]{x^m} = x^{\frac{m}{n}}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2=t\,/\,' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right]$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2=t\ /\ ' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right] =$$

$$= \int$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\boxed{\sqrt[n]{x^m} = x^{\frac{m}{n}}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2=t\ /\ ' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right] =$$

$$= \int t^{\frac{3}{4}}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Zadatak 7

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2=t\ /\ ' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right] =$$

$$= \int t^{\frac{3}{4}}\,\mathrm{d}t$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\boxed{\sqrt[n]{x^m} = x^{\frac{m}{n}}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2 = t\ /\ ' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right] =$$

$$= \int t^{\frac{3}{4}}\,\mathrm{d}t = \frac{t^{\frac{7}{4}}}{\frac{7}{4}}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 7

$$\boxed{\sqrt[n]{x^m} = x^{\frac{m}{n}}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2=t \,/\,' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right] =$$

$$= \int t^{\frac{3}{4}}\,\mathrm{d}t = \frac{t^{\frac{7}{4}}}{\frac{7}{4}} + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2=t \;/\;' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right] =$$

$$= \int t^{\frac{3}{4}}\,\mathrm{d}t = \frac{t^{\frac{7}{4}}}{\frac{7}{4}} + C = \frac{4}{7}t^{\frac{7}{4}} + C$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2=t \,/\,' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right] =$$

$$= \int t^{\frac{3}{4}}\,\mathrm{d}t = \frac{t^{\frac{7}{4}}}{\frac{7}{4}} + C = \frac{4}{7}t^{\frac{7}{4}} + C =$$

$$= \frac{4}{7}$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\boxed{\sqrt[n]{x^m} = x^{\frac{m}{n}}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2 = t \,/\,' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right] =$$

$$= \int t^{\frac{3}{4}}\,\mathrm{d}t = \frac{t^{\frac{7}{4}}}{\frac{7}{4}} + C = \frac{4}{7}t^{\frac{7}{4}} + C =$$

$$= \frac{4}{7}(x-2)^{\frac{7}{4}}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 7

$$\sqrt[n]{x^m} = x^{\frac{m}{n}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2=t\;/\,' \\ \mathrm{d}x=\mathrm{d}t \end{array}\right] =$$

$$= \int t^{\frac{3}{4}}\,\mathrm{d}t = \frac{t^{\frac{7}{4}}}{\frac{7}{4}} + C = \frac{4}{7}t^{\frac{7}{4}} + C =$$

$$= \frac{4}{7}(x-2)^{\frac{7}{4}} + C$$

$$\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C$$

Zadatak 7

$$\boxed{\sqrt[n]{x^m} = x^{\frac{m}{n}}}$$

Riješite neodređeni integral $\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x$.

Rješenje

$$\int \sqrt[4]{(x-2)^3}\,\mathrm{d}x = \int (x-2)^{\frac{3}{4}}\,\mathrm{d}x = \left[\begin{array}{c} x-2=t\ /\ ' \\ \mathrm{d}x = \mathrm{d}t \end{array}\right] =$$

$$= \int t^{\frac{3}{4}}\,\mathrm{d}t = \frac{t^{\frac{7}{4}}}{\frac{7}{4}} + C = \frac{4}{7}t^{\frac{7}{4}} + C =$$

$$= \frac{4}{7}(x-2)^{\frac{7}{4}} + C, \quad C \in \mathbb{R}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

osmi zadatak

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2} \, \mathrm{d}x$.

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x =$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\quad x^2 = t \right.$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\quad x^2 = t \;/\;' \right.$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{l} \quad x^2 = t \,/\,' \\ 2x \end{array}\right.$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{c} x^2 = t \;/\;' \\ 2x\,\mathrm{d}x \end{array}\right.$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\displaystyle\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{r} x^2 = t \;/\,' \\ 2x\,\mathrm{d}x = \end{array}\right.$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{r} x^2 = t \;/\,' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right.$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \begin{bmatrix} x^2 = t \;/\,' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{bmatrix}$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \begin{bmatrix} x^2 = t \;/\; ' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2} \,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2} \,\mathrm{d}x = \left[\begin{array}{r} x^2 = t \;/\;' \\ 2x \,\mathrm{d}x = \mathrm{d}t \end{array} \right] = \int 7^t$$

$$\boxed{\int a^x \,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{r} x^2 = t \;/\;' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int 7^t \cdot$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \begin{bmatrix} x^2 = t \,/\,' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int 7^t \cdot \frac{dt}{2}$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{r} x^2 = t \;/\;' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{r} x^2 = t\ /\ ' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t =$$

$$= \frac{1}{2} \cdot$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{r} x^2 = t \;/\;' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t =$$

$$= \frac{1}{2} \cdot \frac{7^t}{\ln 7}$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{r} x^2 = t \;/\,' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t =$$

$$= \frac{1}{2} \cdot \frac{7^t}{\ln 7} + C$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \begin{bmatrix} x^2 = t \;/\,' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t =$$

$$= \frac{1}{2} \cdot \frac{7^t}{\ln 7} + C = \frac{7^t}{2\ln 7} + C$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \begin{bmatrix} x^2 = t \;/\;' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t =$$

$$= \frac{1}{2} \cdot \frac{7^t}{\ln 7} + C = \frac{7^t}{2\ln 7} + C = \underline{\qquad}$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \begin{bmatrix} x^2 = t \;/\;' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t =$$

$$= \frac{1}{2} \cdot \frac{7^t}{\ln 7} + C = \frac{7^t}{2\ln 7} + C = \frac{}{2\ln 7}$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \begin{bmatrix} x^2 = t \;/\,' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t =$$

$$= \frac{1}{2}\cdot\frac{7^t}{\ln 7} + C = \frac{7^t}{2\ln 7} + C = \frac{7^{x^2}}{2\ln 7}$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{r} x^2 = t \;/\;' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t =$$

$$= \frac{1}{2} \cdot \frac{7^t}{\ln 7} + C = \frac{7^t}{2\ln 7} + C = \frac{7^{x^2}}{2\ln 7} + C$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

Zadatak 8

Riješite neodređeni integral $\int x \cdot 7^{x^2}\,\mathrm{d}x$.

$$\boxed{x\,\mathrm{d}x = \frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int x \cdot 7^{x^2}\,\mathrm{d}x = \left[\begin{array}{r} x^2 = t \;/\,' \\ 2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int 7^t \cdot \frac{dt}{2} = \frac{1}{2}\int 7^t\,\mathrm{d}t =$$

$$= \frac{1}{2}\cdot\frac{7^t}{\ln 7} + C = \frac{7^t}{2\ln 7} + C = \frac{7^{x^2}}{2\ln 7} + C, \quad C \in \mathbb{R}$$

$$\boxed{\int a^x\,\mathrm{d}x = \frac{a^x}{\ln a} + C}$$

deveti zadatak

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Zadatak 9

Riješite neodređeni integral $\displaystyle\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} =$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\displaystyle\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\quad 1-x^2=t \right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\displaystyle\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \Bigg[\quad 1 - x^2 = t \,/\, '$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{l} \quad 1-x^2 = t \,/\, ' \\ -2x \end{array}\right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\displaystyle\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{c} 1-x^2 = t \,/\,' \\ -2x\,\mathrm{d}x \end{array}\right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\displaystyle\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{l} \quad 1-x^2 = t \;/\;' \\ -2x\,\mathrm{d}x = \end{array}\right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{c} 1-x^2 = t \,/\, ' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{r} 1-x^2 = t \;/\;' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right]$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{r} 1-x^2 = t \;/\;' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array} \right] = \int$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{r} 1-x^2 = t \,/\,' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array} \right] = \int \frac{}{}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\displaystyle\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{r} 1-x^2 = t \;/\;' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array} \right] = \int \frac{}{\sqrt{t}}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

$$\boxed{x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{r} 1-x^2 = t \,/\, ' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

$$\boxed{x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{c} 1-x^2 = t \,/\,' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

$$\boxed{x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{r} 1-x^2 = t \,/\,' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t =$$

$$= -\frac{1}{2}\,\cdot$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

$$\boxed{x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \begin{bmatrix} 1-x^2 = t \,/\, ' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t =$$

$$= -\frac{1}{2} \cdot \frac{t^{\frac{1}{2}}}{\frac{1}{2}}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

$$\boxed{x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{r} 1-x^2 = t \,/\, ' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t =$$

$$= -\frac{1}{2}\cdot\frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

$$\boxed{x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{r} 1-x^2 = t \,/\, ' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t =$$

$$= -\frac{1}{2}\cdot\frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C = -\sqrt{t} + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\displaystyle\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

$$\boxed{x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{c} 1-x^2 = t \,/\,' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t =$$

$$= -\frac{1}{2}\cdot\frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C = -\sqrt{t} + C = -\sqrt{1-x^2}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\displaystyle\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

$$\boxed{x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{c} 1-x^2 = t \;/\;' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t =$$

$$= -\frac{1}{2}\cdot\frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C = -\sqrt{t} + C = -\sqrt{1-x^2} + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 9

Riješite neodređeni integral $\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}}$.

$$\boxed{x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

Rješenje

$$\int \frac{x\,\mathrm{d}x}{\sqrt{1-x^2}} = \left[\begin{array}{r} 1-x^2 = t\,/\,' \\ -2x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t =$$

$$= -\frac{1}{2}\cdot\frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C = -\sqrt{t} + C = -\sqrt{1-x^2} + C, \quad C \in \mathbb{R}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

deseti zadatak

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x.$

Zadatak 10

Riješite neodređeni integral $\displaystyle\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x.$

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x =$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\displaystyle\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{l} 1+\ln x = t \\ \\ \end{array}\right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\ 1+\ln x = t \,/\, ' \right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{l} 1+\ln x = t \,/\, ' \\ \quad \frac{1}{x} \end{array} \right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x.$

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \,/\, ' \\ \frac{1}{x}\,\mathrm{d}x \end{array}\right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \;/\; ' \\ \frac{1}{x}\,\mathrm{d}x = \end{array}\right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\displaystyle\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x.$

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \,/\, ' \\ \dfrac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{array}\right.$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \begin{bmatrix} 1+\ln x = t \;/\; ' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{bmatrix}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\displaystyle\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \;/\;' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \;/\; ' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \sqrt[3]{t}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \,/\, ' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \sqrt[3]{t}\,\mathrm{d}t$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \begin{bmatrix} 1+\ln x = t \,/\, ' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int \sqrt[3]{t}\,\mathrm{d}t = \int t^{\frac{1}{3}}\,\mathrm{d}t$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\displaystyle\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \;/\;' \\ \dfrac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \sqrt[3]{t}\,\mathrm{d}t = \int t^{\frac{1}{3}}\,\mathrm{d}t =$$

$$= \frac{t^{\frac{4}{3}}}{\frac{4}{3}}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\displaystyle\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \;/\;' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \sqrt[3]{t}\,\mathrm{d}t = \int t^{\frac{1}{3}}\,\mathrm{d}t =$$

$$= \frac{t^{\frac{4}{3}}}{\frac{4}{3}} + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \;/\;' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \sqrt[3]{t}\,\mathrm{d}t = \int t^{\frac{1}{3}}\,\mathrm{d}t =$$

$$= \frac{t^{\frac{4}{3}}}{\frac{4}{3}} + C = \frac{3}{4}t^{\frac{4}{3}} + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\displaystyle\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \begin{bmatrix} 1+\ln x = t \,/\, ' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int \sqrt[3]{t}\,\mathrm{d}t = \int t^{\frac{1}{3}}\,\mathrm{d}t =$$

$$= \frac{t^{\frac{4}{3}}}{\frac{4}{3}} + C = \frac{3}{4} t^{\frac{4}{3}} + C = \frac{3}{4}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \begin{bmatrix} 1+\ln x = t \;/\;' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int \sqrt[3]{t}\,\mathrm{d}t = \int t^{\frac{1}{3}}\,\mathrm{d}t =$$

$$= \frac{t^{\frac{4}{3}}}{\frac{4}{3}} + C = \frac{3}{4}t^{\frac{4}{3}} + C = \frac{3}{4}\left(1+\ln x\right)^{\frac{4}{3}}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \begin{bmatrix} 1+\ln x = t \;/\;' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int \sqrt[3]{t}\,\mathrm{d}t = \int t^{\frac{1}{3}}\,\mathrm{d}t =$$

$$= \frac{t^{\frac{4}{3}}}{\frac{4}{3}} + C = \frac{3}{4}t^{\frac{4}{3}} + C = \frac{3}{4}\left(1+\ln x\right)^{\frac{4}{3}} + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 10

Riješite neodređeni integral $\displaystyle\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{\sqrt[3]{1+\ln x}}{x}\,\mathrm{d}x = \left[\begin{array}{c} 1+\ln x = t \;/\;' \\ \frac{1}{x}\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \sqrt[3]{t}\,\mathrm{d}t = \int t^{\frac{1}{3}}\,\mathrm{d}t =$$

$$= \frac{t^{\frac{4}{3}}}{\frac{4}{3}} + C = \frac{3}{4}t^{\frac{4}{3}} + C = \frac{3}{4}\left(1+\ln x\right)^{\frac{4}{3}} + C, \quad C \in \mathbb{R}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Napomena za logaritamsku funkciju

Napomena

$$\boxed{\big(\ln|x|\big)' = \frac{1}{x}, \quad x \neq 0}$$

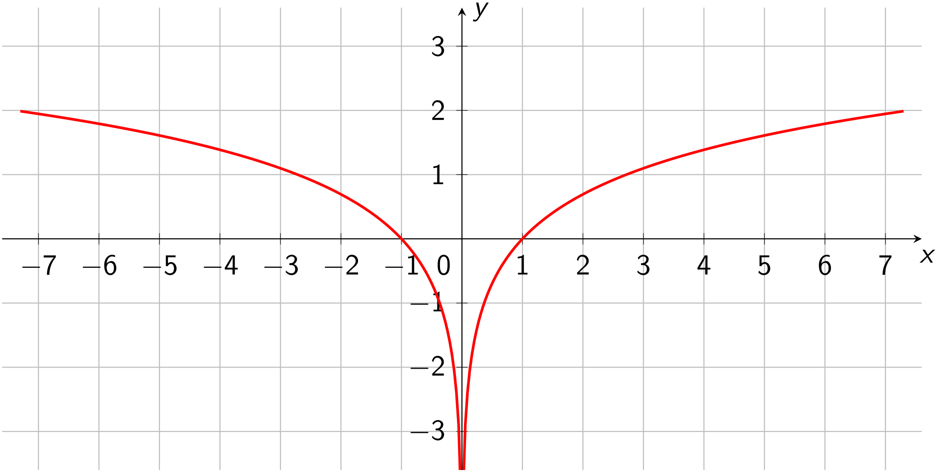
- Ako je $x > 0$, tada je $|x| = x$ pa znamo da vrijedi

$$\big(\ln x\big)' = \frac{1}{x}$$

- Ako je $x < 0$, tada je $|x| = -x$ pa korištenjem pravila za derivaciju složene funkcije ponovo dobivamo

$$\big(\ln(-x)\big)' = \frac{1}{-x} \cdot (-x)' = \frac{1}{-x} \cdot (-1) = \frac{1}{x}$$

Graf funkcije $f(x) = \ln|x|$



jedanaesti zadatak

Zadatak 11

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{3-2x}$.

Zadatak 11

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{3-2x}$.

Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} =$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1} \quad \boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

Zadatak 11

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{3-2x}$.

Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} = \left[\begin{array}{l} 3-2x = t \\ \\ \end{array} \right.$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1} \qquad \boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

Zadatak 11

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{3-2x}$.

Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} = \left[\begin{array}{l} 3-2x = t \,/\,' \\ \\ \end{array}\right.$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1}$$

$$\boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

Zadatak 11

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{3-2x}$.

Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} = \left[\begin{array}{l} 3-2x = t \,/\,' \\ -2 \end{array} \right.$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1} \quad \boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

Zadatak 11

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{3-2x}$.

Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} = \left[\begin{array}{l} 3-2x = t \, / \, ' \\ -2\,\mathrm{d}x \end{array} \right.$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1}$$

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$$\int \frac{\mathrm{d}x}{3-2x} = \left[\begin{array}{l} 3-2x = t \,/\,' \\ -2\,\mathrm{d}x = \end{array} \right.$$

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$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1} \quad \boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

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Riješite neodređeni integral $\int \frac{\mathrm{d}x}{3-2x}$.

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$$\int \frac{\mathrm{d}x}{3-2x} = \left[\begin{array}{c} 3-2x = t \;/\;' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{\qquad}{}$$

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Zadatak 11

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{3-2x}$.

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$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1} \qquad \boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

Zadatak 11

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{3-2x}$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} = \left[\begin{array}{c} 3-2x = t \,/\, ' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{\frac{\mathrm{d}t}{-2}}{t}$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1} \qquad \boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

Zadatak 11

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{3-2x}$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} = \left[\begin{array}{c} 3-2x = t \,/\,' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{\frac{\mathrm{d}t}{-2}}{t} = -\frac{1}{2}\int \frac{\mathrm{d}t}{t}$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1} \qquad \boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

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Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} = \begin{bmatrix} 3-2x = t \,/\,' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int \frac{\frac{\mathrm{d}t}{-2}}{t} = -\frac{1}{2}\int \frac{\mathrm{d}t}{t} =$$

$$= -\frac{1}{2}$$

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$$= -\frac{1}{2}\ln|t|$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1} \quad \boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

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Rješenje

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$$= -\frac{1}{2}\ln|t| + C$$

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Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} = \begin{bmatrix} 3-2x = t \;/\,' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int \frac{\frac{\mathrm{d}t}{-2}}{t} = -\frac{1}{2}\int \frac{\mathrm{d}t}{t} =$$

$$= -\frac{1}{2}\ln|t| + C = -\frac{1}{2}$$

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Rješenje

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$$= -\frac{1}{2}\ln|t| + C = -\frac{1}{2}\ln|3-2x|$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1} \qquad \boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

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$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 11

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{3-2x}$.

$$\boxed{\mathrm{d}x = \frac{\mathrm{d}t}{-2}}$$

Rješenje

$$\int \frac{\mathrm{d}x}{3-2x} = \left[\begin{array}{c} 3-2x = t \,/\,' \\ -2\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{\frac{\mathrm{d}t}{-2}}{t} = -\frac{1}{2}\int \frac{\mathrm{d}t}{t} =$$

$$= -\frac{1}{2}\ln|t| + C = -\frac{1}{2}\ln|3-2x| + C, \quad C \in \mathbb{R}$$

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dvanaesti zadatak

Zadatak 12

Riješite neodređeni integral $\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

Zadatak 12

Riješite neodređeni integral $\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 12

Riješite neodređeni integral $\displaystyle\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 12

Riješite neodređeni integral $\displaystyle\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

$(-3x+1):(2x+3) =$

Rješenje

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 12

Riješite neodređeni integral $\displaystyle\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

$$(-3x+1):(2x+3)=-\frac{3}{2}$$

Rješenje

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 12

Riješite neodređeni integral $\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

$$(-3x+1):(2x+3) = -\frac{3}{2}$$

$$+\frac{9}{2}$$

Rješenje

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 12

Riješite neodređeni integral $\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

$$(-3x+1):(2x+3)=-\frac{3}{2}$$

$$3x+\frac{9}{2}$$

Rješenje

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 12

Riješite neodređeni integral $\displaystyle\int \frac{1-3x}{3+2x}\,\mathrm{d}x.$

$$(-3x+1):(2x+3) = -\frac{3}{2}$$

$$\underline{\;3x+\frac{9}{2}\;}$$

Rješenje

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 12

Riješite neodređeni integral $\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

$$
\begin{array}{l}
(-3x+1):(2x+3) = -\frac{3}{2} \\
\underline{\quad 3x + \frac{9}{2} \quad} \\
\qquad\quad \frac{11}{2}
\end{array}
$$

Rješenje

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 12

Riješite neodređeni integral $\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

$$(-3x+1):(2x+3) = -\frac{3}{2}$$

$$\begin{array}{l} 3x+\frac{9}{2} \\ \hline \quad\quad \frac{11}{2} \end{array}$$

Rješenje

$$\boxed{P_1(x) = P_2(x)Q(x) + R(x)}$$

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

Zadatak 12

Riješite neodređeni integral $\displaystyle\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

$$(-3x+1):(2x+3) = \underbrace{-\frac{3}{2}}_{Q(x)}$$

$$\begin{array}{r} 3x + \dfrac{9}{2} \\ \hline \dfrac{11}{2} \end{array}$$

Rješenje

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Zadatak 12

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Rješenje

$$\boxed{P_1(x) = P_2(x)Q(x) + R(x)}$$

$$(-3x+1):(2x+3) = \underbrace{-\frac{3}{2}}_{Q(x)}$$

$$\begin{array}{l} 3x + \frac{9}{2} \\ \hline \underbrace{\frac{11}{2}}_{R(x)} \end{array}$$

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

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Zadatak 12

Riješite neodređeni integral $\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

Rješenje

$$\boxed{P_1(x) = P_2(x)Q(x) + R(x)}$$

$$(-3x+1) : (2x+3) = -\frac{3}{2}$$

$$\frac{3x + \frac{9}{2}}{\frac{11}{2}}$$

$\boxed{Q(x)}$

$\boxed{R(x)}$

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x =$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

$$\boxed{\frac{P_1(x)}{P_2(x)} = Q(x) + \frac{R(x)}{P_2(x)}}$$

Zadatak 12

Riješite neodređeni integral $\int \frac{1-3x}{3+2x}\,\mathrm{d}x.$

$$(-3x+1):(2x+3) = -\frac{3}{2}$$

$$\begin{array}{l} 3x+\frac{9}{2} \\ \hline \quad\quad \frac{11}{2} \end{array}$$

$\boxed{Q(x)}$

$\boxed{R(x)}$

Rješenje

$$\boxed{P_1(x) = P_2(x)Q(x) + R(x)}$$

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x = \int \Bigg($$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

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Zadatak 12

Riješite neodređeni integral $\displaystyle\int \frac{1-3x}{3+2x}\,\mathrm{d}x.$

$$(-3x+1):(2x+3) = -\frac{3}{2}$$

$$\frac{3x+\frac{9}{2}}{\qquad}$$

$$\frac{11}{2}$$

$$\boxed{Q(x)} \qquad \boxed{R(x)}$$

Rješenje

$$\boxed{P_1(x) = P_2(x)Q(x) + R(x)}$$

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x = \int \Bigg(-\frac{3}{2}$$

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Riješite neodređeni integral $\displaystyle\int \frac{1-3x}{3+2x}\,\mathrm{d}x.$

$$(-3x+1) : (2x+3) = \underbrace{-\frac{3}{2}}_{Q(x)}$$

$$\frac{3x+\frac{9}{2}}{\qquad}$$

$$\underbrace{\frac{11}{2}}_{R(x)}$$

Rješenje

$$\boxed{P_1(x) = P_2(x)Q(x) + R(x)}$$

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x = \int \left(-\frac{3}{2} + \right.$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C} \qquad \boxed{\frac{P_1(x)}{P_2(x)} = Q(x) + \frac{R(x)}{P_2(x)}}$$

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$$\frac{11}{2}$$

$\boxed{Q(x)}$ $\boxed{R(x)}$

Rješenje

$$\boxed{P_1(x) = P_2(x)Q(x) + R(x)}$$

$$\int \frac{1-3x}{3+2x}\,\mathrm{d}x = \int \frac{-3x+1}{2x+3}\,\mathrm{d}x = \int \left(-\frac{3}{2} + \frac{\qquad}{} \right.$$

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Riješite neodređeni integral $\displaystyle\int \frac{1-3x}{3+2x}\,\mathrm{d}x$.

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Rješenje

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$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C} \qquad \boxed{\frac{P_1(x)}{P_2(x)} = Q(x) + \frac{R(x)}{P_2(x)}}$$

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$$= -\frac{3}{2}x + \frac{11}{4}\ln|2x+3| + C$$

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Rješenje

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$$= -\frac{3}{2}x + \frac{11}{4}\ln|2x+3| + C, \quad C \in \mathbb{R}$$

$$\boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C} \qquad \boxed{\frac{P_1(x)}{P_2(x)} = Q(x) + \frac{R(x)}{P_2(x)}}$$

trinaesti zadatak

Zadatak 13

Riješite neodređeni integral $\displaystyle\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x.$

Zadatak 13

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Rješenje

$$(x^2+5x-4):(5x+3)=$$

Zadatak 13

Riješite neodređeni integral $\displaystyle\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x.$

Rješenje

$$(x^2+5x-\ 4):(5x+3)=\frac{1}{5}x$$

Zadatak 13

Riješite neodređeni integral $\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x$.

Rješenje

$$(x^2 + 5x - 4) : (5x + 3) = \frac{1}{5}x$$

$$-x^2$$

Zadatak 13

Riješite neodređeni integral $\int \frac{x^2 + 5x - 4}{5x + 3} \, \mathrm{d}x$.

Rješenje

$$(x^2 + 5x - 4) : (5x + 3) = \frac{1}{5}x$$
$$-x^2 - \frac{3}{5}x$$

Zadatak 13

Riješite neodređeni integral $\displaystyle\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x.$

Rješenje

$$(x^2 + 5x - 4) : (5x + 3) = \frac{1}{5}x$$

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Zadatak 13

Riješite neodređeni integral $\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x$.

Rješenje

$$
\begin{array}{l}
\quad (x^2 + 5x - 4) : (5x+3) = \dfrac{1}{5}x \\
\underline{-x^2 - \dfrac{3}{5}x \qquad\qquad\qquad} \\
\qquad\quad \dfrac{22}{5}x
\end{array}
$$

Zadatak 13

Riješite neodređeni integral $\displaystyle\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x.$

Rješenje

$$
\begin{array}{l}
\quad (x^2 + 5x - 4) : (5x+3) = \dfrac{1}{5}x \\
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\hline
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Rješenje

$$(x^2+5x-\ 4):(5x+3)=\frac{1}{5}x+\frac{22}{25}$$

$$\begin{array}{l} -x^2-\dfrac{3}{5}x \\ \hline \qquad\dfrac{22}{5}x-\ 4 \end{array}$$

Zadatak 13

Riješite neodređeni integral $\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x.$

Rješenje

$$
\begin{aligned}
&(x^2+5x-4):(5x+3)=\frac{1}{5}x+\frac{22}{25}\\
&\underline{-x^2-\frac{3}{5}x}\\
&\qquad\frac{22}{5}x-4\\
&\quad-\frac{22}{5}x
\end{aligned}
$$

Zadatak 13

Riješite neodređeni integral $\displaystyle\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x.$

Rješenje

$$
\begin{array}{l}
\quad (x^2 + 5x - 4) : (5x+3) = \dfrac{1}{5}x + \dfrac{22}{25} \\
\underline{-x^2 - \dfrac{3}{5}x \qquad\qquad} \\
\qquad\quad \dfrac{22}{5}x - 4 \\
\qquad - \dfrac{22}{5}x - \dfrac{66}{25}
\end{array}
$$

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$$
\begin{array}{l}
(x^2 + 5x - 4) : (5x+3) = \frac{1}{5}x + \frac{22}{25} \\
-x^2 - \frac{3}{5}x \\
\hline
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\quad -\frac{22}{5}x - \frac{66}{25} \\
\hline
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$$

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Riješite neodređeni integral $\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x$.

Rješenje

$$
\begin{array}{l}
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\qquad \frac{22}{5}x - 4 \\
\quad \underline{-\frac{22}{5}x - \frac{66}{25}} \\
\qquad\qquad -\frac{166}{25}
\end{array}
$$

Zadatak 13

Riješite neodređeni integral $\displaystyle\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x.$

Rješenje

$$
\begin{array}{l}
(x^2+5x-4):(5x+3)=\boxed{\dfrac{1}{5}x+\dfrac{22}{25}} \longleftarrow \boxed{Q(x)} \\
\underline{-x^2-\dfrac{3}{5}x\qquad\qquad} \\
\qquad\dfrac{22}{5}x-4 \\
\quad\underline{-\dfrac{22}{5}x-\dfrac{66}{25}} \\
\qquad\qquad-\dfrac{166}{25}
\end{array}
$$

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Rješenje

$$(x^2+5x-4):(5x+3)=\boxed{\frac{1}{5}x+\frac{22}{25}} \longleftarrow Q(x)$$

$$-x^2-\frac{3}{5}x$$

$$\frac{22}{5}x-4$$

$$-\frac{22}{5}x-\frac{66}{25}$$

$$R(x)\longrightarrow \boxed{-\frac{166}{25}}$$

Zadatak 13

Riješite neodređeni integral $\displaystyle\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x.$

Rješenje

$$(x^2+5x-4):(5x+3)=\boxed{\frac{1}{5}x+\frac{22}{25}} \leftarrow \boxed{Q(x)}$$

$$-x^2-\frac{3}{5}x$$

$$\frac{22}{5}x-4$$

$$-\frac{22}{5}x-\frac{66}{25}$$

$$\boxed{R(x)} \rightarrow \boxed{-\frac{166}{25}}$$

$$\boxed{P_1(x)=P_2(x)Q(x)+R(x)}$$

$$\boxed{\frac{P_1(x)}{P_2(x)}=Q(x)+\frac{R(x)}{P_2(x)}}$$

$$\frac{x^2+5x-4}{5x+3}=$$

Zadatak 13

Riješite neodređeni integral $\displaystyle\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x.$

Rješenje

$$(x^2+5x-4):(5x+3)=\boxed{\frac{1}{5}x+\frac{22}{25}} \longleftarrow \boxed{Q(x)}$$

$$\begin{array}{l}
-x^2-\dfrac{3}{5}x \\
\hline
\qquad\dfrac{22}{5}x-4 \\
\quad-\dfrac{22}{5}x-\dfrac{66}{25} \\
\hline
\end{array}$$

$$\boxed{R(x)} \longrightarrow \boxed{-\frac{166}{25}}$$

$$\boxed{P_1(x)=P_2(x)Q(x)+R(x)}$$

$$\boxed{\frac{P_1(x)}{P_2(x)}=Q(x)+\frac{R(x)}{P_2(x)}}$$

$$\frac{x^2+5x-4}{5x+3}=\frac{1}{5}x+\frac{22}{25}$$

Zadatak 13

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Rješenje

$$
\begin{array}{l}
(x^2+5x-4):(5x+3) = \boxed{\frac{1}{5}x+\frac{22}{25}} \leftarrow \boxed{Q(x)} \\
\underline{-x^2-\frac{3}{5}x} \\
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\qquad \underline{-\frac{22}{5}x-\frac{66}{25}} \\
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\end{array}
$$

$$\boxed{P_1(x)=P_2(x)Q(x)+R(x)}$$

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$$\frac{x^2+5x-4}{5x+3} = \frac{1}{5}x + \frac{22}{25} + \frac{}{}$$

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Rješenje

$$(x^2+5x-4):(5x+3) = \boxed{\frac{1}{5}x+\frac{22}{25}} \leftarrow \boxed{Q(x)}$$

$$\begin{array}{l} -x^2-\frac{3}{5}x \\ \hline \quad \frac{22}{5}x-4 \\ \quad -\frac{22}{5}x-\frac{66}{25} \\ \hline \boxed{R(x)} \rightarrow \boxed{-\frac{166}{25}} \end{array}$$

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Rješenje

$$(x^2+5x-4):(5x+3)=\boxed{\frac{1}{5}x+\frac{22}{25}} \longleftarrow \boxed{Q(x)}$$

$$\begin{array}{l}
-x^2-\dfrac{3}{5}x \\
\hline
\qquad\dfrac{22}{5}x-4 \\
\quad -\dfrac{22}{5}x-\dfrac{66}{25} \\
\hline
\end{array}$$

$$\boxed{R(x)} \longrightarrow \boxed{-\frac{166}{25}}$$

$$\boxed{P_1(x)=P_2(x)Q(x)+R(x)}$$

$$\boxed{\frac{P_1(x)}{P_2(x)}=Q(x)+\frac{R(x)}{P_2(x)}}$$

$$\frac{x^2+5x-4}{5x+3}=\frac{1}{5}x+\frac{22}{25}+\frac{-\frac{166}{25}}{5x+3}$$

$$\int \frac{x^2 + 5x - 4}{5x + 3} \, \mathrm{d}x =$$

$$\int \frac{x^2 + 5x - 4}{5x + 3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x + 3} \right) \mathrm{d}x$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5} \int x \,\mathrm{d}x$$

$$\int \frac{x^2 + 5x - 4}{5x + 3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x + 3} \right) \mathrm{d}x =$$

$$= \frac{1}{5} \int x \,\mathrm{d}x +$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x -$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3}$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3} =$$

$$= \frac{1}{5}\cdot$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3} =$$

$$= \frac{1}{5} \cdot \frac{x^2}{2}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3} =$$

$$= \frac{1}{5}\cdot\frac{x^2}{2} +$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3} =$$

$$= \frac{1}{5}\cdot\frac{x^2}{2} + \frac{22}{25}x$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3} =$$

$$= \frac{1}{5}\cdot\frac{x^2}{2} + \frac{22}{25}x - \frac{166}{25}\cdot$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C} \quad \boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3} =$$

$$= \frac{1}{5}\cdot\frac{x^2}{2} + \frac{22}{25}x - \frac{166}{25}\cdot\frac{1}{5}\ln|5x+3|$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C} \quad \boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3} =$$

$$= \frac{1}{5}\cdot\frac{x^2}{2} + \frac{22}{25}x - \frac{166}{25}\cdot\frac{1}{5}\ln|5x+3| + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C} \quad \boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3} =$$

$$= \frac{1}{5}\cdot\frac{x^2}{2} + \frac{22}{25}x - \frac{166}{25}\cdot\frac{1}{5}\ln|5x+3| + C =$$

$$= \frac{1}{10}x^2 + \frac{22}{25}x - \frac{166}{125}\ln|5x+3| + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C} \qquad \boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

$$\int \frac{x^2+5x-4}{5x+3}\,\mathrm{d}x = \int \left(\frac{1}{5}x + \frac{22}{25} + \frac{-\frac{166}{25}}{5x+3} \right) \mathrm{d}x =$$

$$= \frac{1}{5}\int x\,\mathrm{d}x + \frac{22}{25}\int \mathrm{d}x - \frac{166}{25}\int \frac{\mathrm{d}x}{5x+3} =$$

$$= \frac{1}{5}\cdot\frac{x^2}{2} + \frac{22}{25}x - \frac{166}{25}\cdot\frac{1}{5}\ln|5x+3| + C =$$

$$= \frac{1}{10}x^2 + \frac{22}{25}x - \frac{166}{125}\ln|5x+3| + C, \quad C \in \mathbb{R}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C} \quad \boxed{\int \frac{\mathrm{d}x}{ax+b} = \frac{1}{a}\ln|ax+b| + C}$$

četrnaesti zadatak

Zadatak 14

Riješite neodređeni integral $\int \frac{1 - \sin x}{x + \cos x} \, \mathrm{d}x.$

Zadatak 14

Riješite neodređeni integral $\displaystyle\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x =$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 14

Riješite neodređeni integral $\displaystyle\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x.$

Rješenje

$$\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x = \int \frac{}{}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 14

Riješite neodređeni integral $\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x = \int \frac{}{x+\cos x}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 14

Riješite neodređeni integral $\displaystyle\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x = \int \frac{(x+\cos x)'}{x+\cos x}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 14

Riješite neodređeni integral $\displaystyle\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x = \int \frac{(x+\cos x)'}{x+\cos x}\,\mathrm{d}x$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 14

Riješite neodređeni integral $\displaystyle\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x.$

Rješenje

$$\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x = \int \frac{(x+\cos x)'}{x+\cos x}\,\mathrm{d}x = \ln\left|x+\cos x\right|$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 14

Riješite neodređeni integral $\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x = \int \frac{(x+\cos x)'}{x+\cos x}\,\mathrm{d}x = \ln\left|x+\cos x\right| + C$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 14

Riješite neodređeni integral $\displaystyle\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x$.

Rješenje

$$\int \frac{1-\sin x}{x+\cos x}\,\mathrm{d}x = \int \frac{(x+\cos x)'}{x+\cos x}\,\mathrm{d}x = \ln\left|x+\cos x\right| + C, \qquad C \in \mathbb{R}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

petnaesti zadatak

Zadatak 15

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{e^x + 2}$.

Zadatak 15

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x + 2} =$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x + 2} = \quad \int \frac{}{}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \int \frac{}{e^x+2}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\big|f(x)\big| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x + 2} = \int \frac{(e^x + 2) - e^x}{e^x + 2}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x + 2} = \frac{1}{2} \int \frac{(e^x + 2) - e^x}{e^x + 2}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x + 2} = \frac{1}{2} \int \frac{(e^x + 2) - e^x}{e^x + 2} \, \mathrm{d}x$$

$$\boxed{\int \frac{f'(x)}{f(x)} \, \mathrm{d}x = \ln \big| f(x) \big| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \Bigg(1$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\big|f(x)\big| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \Bigg(1 -$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\big|f(x)\big| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x + 2} = \frac{1}{2} \int \frac{(e^x + 2) - e^x}{e^x + 2} \,\mathrm{d}x = \frac{1}{2} \int \left(1 - \frac{e^x}{e^x + 2}\right) \mathrm{d}x$$

$$\boxed{\int \frac{f'(x)}{f(x)} \,\mathrm{d}x = \ln \left| f(x) \right| + C}$$

Zadatak 15

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1 - \frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\qquad\qquad\qquad\qquad \right)$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x \qquad\qquad\qquad\qquad \right)$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \qquad\qquad\qquad\right)$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right)$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

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$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x -$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \underline{\qquad\qquad}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1 - \frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \frac{}{e^x+2}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \frac{(e^x+2)'}{e^x+2}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \frac{(e^x+2)'}{e^x+2}\,\mathrm{d}x$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

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Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

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$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \frac{(e^x+2)'}{e^x+2}\,\mathrm{d}x =$$

$$= \frac{1}{2}x$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \frac{(e^x+2)'}{e^x+2}\,\mathrm{d}x =$$

$$= \frac{1}{2}x -$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \frac{(e^x+2)'}{e^x+2}\,\mathrm{d}x =$$

$$= \frac{1}{2}x - \frac{1}{2}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x + 2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1 - \frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \frac{(e^x+2)'}{e^x+2}\,\mathrm{d}x =$$

$$= \frac{1}{2}x - \frac{1}{2}\ln\left(e^x+2\right)$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

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$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \frac{(e^x+2)'}{e^x+2}\,\mathrm{d}x =$$

$$= \frac{1}{2}x - \frac{1}{2}\ln\left(e^x+2\right) + C$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

Zadatak 15

Riješite neodređeni integral $\displaystyle\int \frac{\mathrm{d}x}{e^x+2}$.

Rješenje

$$\int \frac{\mathrm{d}x}{e^x+2} = \frac{1}{2}\int \frac{(e^x+2)-e^x}{e^x+2}\,\mathrm{d}x = \frac{1}{2}\int \left(1-\frac{e^x}{e^x+2}\right)\mathrm{d}x =$$

$$= \frac{1}{2}\cdot\left(\int \mathrm{d}x - \int \frac{e^x}{e^x+2}\,\mathrm{d}x\right) = \frac{1}{2}x - \frac{1}{2}\int \frac{(e^x+2)'}{e^x+2}\,\mathrm{d}x =$$

$$= \frac{1}{2}x - \frac{1}{2}\ln\left(e^x+2\right) + C, \quad C \in \mathbb{R}$$

$$\boxed{\int \frac{f'(x)}{f(x)}\,\mathrm{d}x = \ln\left|f(x)\right| + C}$$

šesnaesti zadatak

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x =$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\quad \cos x = t \right.$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\qquad \cos x = t \,/\, ' \right.$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \,\mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \,\mathrm{d}x = \int \frac{\sin x}{\cos x} \,\mathrm{d}x = \left[\begin{array}{c} \cos x = t \;/\,' \\ -\sin x \end{array} \right.$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \; / \; ' \\ -\sin x \, \mathrm{d}x \end{array} \right.$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \;/\;' \\ -\sin x \, \mathrm{d}x = \end{array} \right.$$

Zadatak 16

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Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \; / \, ' \\ -\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right.$$

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Zadatak 16

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Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \,/\, ' \\ -\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right] =$$

$$= \int \frac{}{}$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \; / \; ' \\ -\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right] =$$

$$= \int \frac{}{t}$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

$$\boxed{\sin x \, \mathrm{d}x = -\mathrm{d}t}$$

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \;/\; ' \\ -\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right] =$$

$$= \int \frac{}{t}$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \,\mathrm{d}x$.

$$\boxed{\sin x \,\mathrm{d}x = -\mathrm{d}t}$$

Rješenje

$$\int \operatorname{tg} x \,\mathrm{d}x = \int \frac{\sin x}{\cos x}\,\mathrm{d}x = \begin{bmatrix} \cos x = t \;/\;' \\ -\sin x \,\mathrm{d}x = \mathrm{d}t \end{bmatrix} =$$

$$= \int \frac{-\mathrm{d}t}{t}$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

$$\boxed{\sin x \, \mathrm{d}x = -\mathrm{d}t}$$

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \; / \, ' \\ -\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right] =$$

$$= \int \frac{-\mathrm{d}t}{t} = -\int \frac{\mathrm{d}t}{t}$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

$$\boxed{\sin x \, \mathrm{d}x = -\mathrm{d}t}$$

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \; / \, ' \\ -\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right] =$$

$$= \int \frac{-\mathrm{d}t}{t} = -\int \frac{\mathrm{d}t}{t} = -\ln|t|$$

$$\boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

Zadatak 16

$\boxed{\sin x \, \mathrm{d}x = -\mathrm{d}t}$

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \; / \; ' \\ -\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right] =$$

$$= \int \frac{-\mathrm{d}t}{t} = -\int \frac{\mathrm{d}t}{t} = -\ln|t| + C$$

$$\boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

Zadatak 16

$$\boxed{\sin x\,\mathrm{d}x = -\mathrm{d}t}$$

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \left[\begin{array}{r} \cos x = t \; / \, ' \\ -\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right] =$$

$$= \int \frac{-\mathrm{d}t}{t} = -\int \frac{\mathrm{d}t}{t} = -\ln|t| + C = -\ln|\cos x|$$

$$\boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

Zadatak 16

Riješite neodređeni integral $\int \operatorname{tg} x \, \mathrm{d}x$.

$$\boxed{\sin x \, \mathrm{d}x = -\mathrm{d}t}$$

Rješenje

$$\int \operatorname{tg} x \, \mathrm{d}x = \int \frac{\sin x}{\cos x} \, \mathrm{d}x = \begin{bmatrix} \cos x = t \; / \; ' \\ -\sin x \, \mathrm{d}x = \mathrm{d}t \end{bmatrix} =$$

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Zadatak 16

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$$= \int \frac{-\mathrm{d}t}{t} = -\int \frac{\mathrm{d}t}{t} = -\ln|t| + C = -\ln|\cos x| + C, \quad C \in \mathbb{R}$$

$$\boxed{\int \frac{\mathrm{d}x}{x} = \ln|x| + C}$$

sedamnaesti zadatak

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1 + 2\cos x}}$ za koju je $g(0) = 1$.

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1 + 2\cos x}}$ *za koju je* $g(0) = 1$.

Rješenje

$$\int \frac{\sin x}{\sqrt{1 + 2\cos x}} \, \mathrm{d}x =$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1 + 2\cos x}}$ za koju je $g(0) = 1$.

Rješenje

$$\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = \left[\quad 1 + 2\cos x = t \right.$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1 + 2\cos x}}$ *za koju je* $g(0) = 1$.

Rješenje

$$\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = \Bigg[\quad 1 + 2\cos x = t \;/\;' $$

Zadatak 17

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Rješenje

$$\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = \left[\begin{array}{l} 1 + 2\cos x = t \,/\,' \\ -2\sin x \end{array}\right.$$

Zadatak 17

Odredite primitivnu funkciju g *funkcije* $f(x) = \dfrac{\sin x}{\sqrt{1 + 2\cos x}}$ *za koju je* $g(0) = 1$.

Rješenje

$$\int \frac{\sin x}{\sqrt{1 + 2\cos x}} \,\mathrm{d}x = \left[\begin{array}{l} 1 + 2\cos x = t \;/\;' \\ -2\sin x \,\mathrm{d}x \end{array} \right.$$

Zadatak 17

Odredite primitivnu funkciju g *funkcije* $f(x) = \dfrac{\sin x}{\sqrt{1 + 2\cos x}}$ *za koju je* $g(0) = 1$.

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$$\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = \left[\begin{array}{c} 1 + 2\cos x = t \;/\; ' \\ -2\sin x \,\mathrm{d}x = \mathrm{d}t \end{array}\right.$$

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$$\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = \left[\begin{array}{c} 1 + 2\cos x = t \;/\,' \\ -2\sin x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int$$

Zadatak 17

Odredite primitivnu funkciju g *funkcije* $f(x) = \frac{\sin x}{\sqrt{1+2\cos x}}$ *za koju je* $g(0) = 1$.

Rješenje

$$\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = \begin{bmatrix} 1+2\cos x = t \;/\;' \\ -2\sin x\,\mathrm{d}x = \mathrm{d}t \end{bmatrix} = \int \frac{}{}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1+2\cos x}}$ *za koju je* $g(0) = 1$.

Rješenje

$$\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = \left[\begin{array}{c} 1+2\cos x = t \;/\,' \\ -2\sin x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{}{\sqrt{t}}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1 + 2\cos x}}$ za koju je $g(0) = 1$.

Rješenje

$$\boxed{\sin x \, \mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

$$\int \frac{\sin x}{\sqrt{1+2\cos x}} \, \mathrm{d}x = \left[\begin{array}{c} 1 + 2\cos x = t \;/\,' \\ -2\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1+2\cos x}}$ za koju je $g(0) = 1$.

Rješenje

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$$= -\frac{1}{2} \int \frac{\mathrm{d}t}{\sqrt{t}}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1 + 2\cos x}}$ *za koju je* $g(0) = 1$.

Rješenje

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$$= -\frac{1}{2} \int \frac{\mathrm{d}t}{\sqrt{t}} = -\frac{1}{2} \int t^{-\frac{1}{2}} \, \mathrm{d}t$$

Zadatak 17

Odredite primitivnu funkciju g *funkcije* $f(x) = \dfrac{\sin x}{\sqrt{1+2\cos x}}$ *za koju je* $g(0) = 1$.

Rješenje

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$$= -\frac{1}{2}\int \frac{\mathrm{d}t}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t = -\frac{1}{2}\cdot$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1+2\cos x}}$ za koju je $g(0) = 1$.

Rješenje

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$$= -\frac{1}{2}\int \frac{\mathrm{d}t}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t = -\frac{1}{2}\cdot\frac{t^{\frac{1}{2}}}{\frac{1}{2}}$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1+2\cos x}}$ *za koju je* $g(0) = 1$.

Rješenje

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$$= -\frac{1}{2}\int \frac{\mathrm{d}t}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t = -\frac{1}{2}\cdot\frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C$$

$$\boxed{\int x^n \,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1+2\cos x}}$ za koju je $g(0) = 1$.

Rješenje

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$$= -\frac{1}{2}\int \frac{\mathrm{d}t}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t = -\frac{1}{2}\cdot\frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C = -\sqrt{t} + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1+2\cos x}}$ za koju je $g(0) = 1$.

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$$= -\frac{1}{2} \int \frac{\mathrm{d}t}{\sqrt{t}} = -\frac{1}{2} \int t^{-\frac{1}{2}} \, \mathrm{d}t = -\frac{1}{2} \cdot \frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C = -\sqrt{t} + C =$$

$$= -\sqrt{1+2\cos x}$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1+2\cos x}}$ za koju je $g(0) = 1$.

Rješenje

$$\boxed{\sin x\,\mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

$$\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = \left[\begin{array}{c} 1+2\cos x = t \;/\;' \\ -2\sin x\,\mathrm{d}x = \mathrm{d}t \end{array}\right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} =$$

$$= -\frac{1}{2}\int \frac{\mathrm{d}t}{\sqrt{t}} = -\frac{1}{2}\int t^{-\frac{1}{2}}\,\mathrm{d}t = -\frac{1}{2}\cdot\frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C = -\sqrt{t} + C =$$

$$= -\sqrt{1+2\cos x} + C$$

$$\boxed{\int x^n\,\mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

Zadatak 17

Odredite primitivnu funkciju g funkcije $f(x) = \dfrac{\sin x}{\sqrt{1 + 2\cos x}}$ za koju je $g(0) = 1$.

Rješenje

$$\boxed{\sin x \, \mathrm{d}x = -\frac{\mathrm{d}t}{2}}$$

$$\int \frac{\sin x}{\sqrt{1 + 2\cos x}} \, \mathrm{d}x = \left[\begin{array}{c} 1 + 2\cos x = t \;/\, ' \\ -2\sin x \, \mathrm{d}x = \mathrm{d}t \end{array} \right] = \int \frac{-\frac{\mathrm{d}t}{2}}{\sqrt{t}} =$$

$$= -\frac{1}{2} \int \frac{\mathrm{d}t}{\sqrt{t}} = -\frac{1}{2} \int t^{-\frac{1}{2}} \, \mathrm{d}t = -\frac{1}{2} \cdot \frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C = -\sqrt{t} + C =$$

$$= -\sqrt{1 + 2\cos x} + C, \quad C \in \mathbb{R}$$

$$\boxed{\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + C}$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$g(x) = -\sqrt{1 + 2\cos x} + C$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1 + 2\cos x} + C$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1 + 2\cos x} + C$$

$$g(0) =$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1 + 2\cos x} + C$$

$$g(0) = -\sqrt{1 + 2\cos 0}$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1 + 2\cos x} + C$$

$$g(0) = -\sqrt{1 + 2\cos 0} + C$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1+2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = -\sqrt{1+2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1+2\cos x} + C$$

$$g(0) = -\sqrt{1+2\cos 0} + C$$

$$1 =$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1+2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = -\sqrt{1+2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1+2\cos x} + C$$

$$g(0) = -\sqrt{1+2\cos 0} + C$$

$$1 = -\sqrt{1+2\cdot 1}$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1 + 2\cos x} + C$$

$$g(0) = -\sqrt{1 + 2\cos 0} + C$$

$$1 = -\sqrt{1 + 2 \cdot 1} + C$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1 + 2\cos x} + C$$

$$g(0) = -\sqrt{1 + 2\cos 0} + C$$

$$1 = -\sqrt{1 + 2 \cdot 1} + C$$

$$1 =$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1+2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = -\sqrt{1+2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1+2\cos x} + C$$

$$g(0) = -\sqrt{1+2\cos 0} + C$$

$$1 = -\sqrt{1+2\cdot 1} + C$$

$$1 = -\sqrt{3}$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1+2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = -\sqrt{1+2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1+2\cos x} + C$$

$$g(0) = -\sqrt{1+2\cos 0} + C$$

$$1 = -\sqrt{1+2\cdot 1} + C$$

$$1 = -\sqrt{3} + C$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1+2\cos x}}} \qquad \boxed{\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = -\sqrt{1+2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1+2\cos x} + C$$

$$g(0) = -\sqrt{1+2\cos 0} + C$$

$$1 = -\sqrt{1+2\cdot 1} + C$$

$$1 = -\sqrt{3} + C$$

$$C =$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1+2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1+2\cos x}}\,\mathrm{d}x = -\sqrt{1+2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1+2\cos x} + C$$

$$g(0) = -\sqrt{1+2\cos 0} + C$$

$$1 = -\sqrt{1+2\cdot 1} + C$$

$$1 = -\sqrt{3} + C$$

$$C = \sqrt{3} + 1$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1 + 2\cos x} + C$$

$$g(0) = -\sqrt{1 + 2\cos 0} + C$$

$$1 = -\sqrt{1 + 2 \cdot 1} + C$$

$$1 = -\sqrt{3} + C$$

$$\boxed{C = \sqrt{3} + 1}$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1}$$

$$g(x) = -\sqrt{1 + 2\cos x} + C$$

$$g(0) = -\sqrt{1 + 2\cos 0} + C$$

$$1 = -\sqrt{1 + 2 \cdot 1} + C$$

$$1 = -\sqrt{3} + C$$

$$\boxed{C = \sqrt{3} + 1}$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1 + 2\cos x} + C$$

$$g(0) = -\sqrt{1 + 2\cos 0} + C$$

$$1 = -\sqrt{1 + 2 \cdot 1} + C$$

$$1 = -\sqrt{3} + C$$

$$\boxed{C = \sqrt{3} + 1}$$

$$g(x) = -\sqrt{1 + 2\cos x} + \sqrt{3} + 1$$

$$\boxed{f(x) = \frac{\sin x}{\sqrt{1 + 2\cos x}}}$$

$$\boxed{\int \frac{\sin x}{\sqrt{1 + 2\cos x}}\,\mathrm{d}x = -\sqrt{1 + 2\cos x} + C}$$

$$\boxed{g(0) = 1} \longrightarrow g(x) = -\sqrt{1 + 2\cos x} + C$$

$$g(0) = -\sqrt{1 + 2\cos 0} + C$$

$$1 = -\sqrt{1 + 2 \cdot 1} + C$$

$$1 = -\sqrt{3} + C$$

$$\boxed{C = \sqrt{3} + 1}$$

$$\boxed{g(x) = -\sqrt{1 + 2\cos x} + \sqrt{3} + 1}$$